IN THE SPECIFICATION

Please amend the paragraphs of the specification as follows:

On page 1, beginning at line 21, paragraph no. 2:

CDMA communication systems are very sensitive to peak transmit power and are generally limited by interference related to transmit power levels. One interference related limitation is the so called "Near-Far Problem". In this problem as transmit power increases during a transmission it causes more interference in other channels. To deal with this additional interference, the other channels must increase their own transmit power. The increase in transmit power by the other channels in turn generates more interference for all the channels. This avalanche effect occurs until the system is stabilized and all the channels are satisfied. Therefore, in order to maximize the capacity of such a system it is desirable that each user transmits only the minimum power necessary to achieve a required quality of service. Another problem that can degrade the performance of other links in a transmission system is a waveform that contains a discontinuous power pattern. This problem compounds the Near-Far Problem.

On page 2, beginning at line 25, paragraph no. 3:

Referring now to Fig. 1, there is shown graphical representation 10 of transmission waveforms 12, 18. Transmission waveform 12 is formed of waveform portions 14, 16 having differing power levels. The transmit power level limitation of the amplifier [[is]] will be reached by portion 14 rather than by portion 16 because portion 14 has the highest instantaneous power. In contrast, transmission waveform 18 has a constant envelope. Transmitting at the maximum power permits higher energy transmission, as illustrated by the areas under transmission waveforms 12, 18. In order to maximize the total transmit energy over a period of time, it is therefore desirable that the signal applied to the transmitter have a peak to average power ratio as close to one as possible. Furthermore, in addition to preventing the peak transmit power

problems, a constant power level reduces self interference that can result from fast changes of the loading in the power amplifier.

On page 3, beginning at line 10, paragraph no. 1:

For example, Fig. 2 shows a plurality of transmission waveforms [[20a-n]] 20A-M. The number n of transmission waveforms [[20a-n]] 20A-M can be very large. For example, [[n]] M can commonly have a value of two hundred or more in CDMA communication systems. Transmission signal [[20a-n]] 20A-M is formed of pilot portions 22, control portions 24, voice portions 26, and data portions 28. Pilot portions 22 of transmission signals [[20a-n]] 20A-M always have a high power level. By definition, in order to serve as a pilot signal, portion ~~portions~~ 22 must always be high. Data portions 28 are usually relatively high because it is a very highly utilized time slot. Voice portions 26, on the other hand, are typically low because voice signals have many unused periods.

On page 3, beginning at line 10, paragraph no. 2:

Total power waveform 30 represents the total power of transmission waveforms [[20a-n]] 20A-M summed together. Because pilot portions 22 and data portions [[22]] 28 are at high levels within transmission waveforms [[20a-n]] 20A-M, the corresponding portions 32, [[36]] 38 of total power waveform 30 are high. Because voice portions 26 vary and are usually low, portion [[34]] 36 of total power waveform 30 can vary from close to zero to an intermediate level [[34]].

On page 4, beginning at line 22:

Fig. 7 shows a graphical representation of a transmission waveform interleaved according to the method of the present invention.

On page 5, beginning at line 18, paragraph no. 3:

Referring now to Fig. 4, there is shown graphical representation 70 of transmit waveforms [[74a-n]] 74A-B. Transmit waveforms [[74a-n]] 74A-B can include pilot portions 78, power up/down portions 82, control portions 86, and data portion 90 within each time slot 72. Data portions 90 contain data pulse 92. The peak transmit power of a band carrying transmit waveforms [[74a-n]] 74A-B is the sum of the power of each waveform [[74a-n]] 74A-B. Thus, in order to minimize the peak transmit power, and to thereby minimize unwanted emissions, the sum of transmit waveforms [[74a-n]] 74A-B can be averaged and smoothed.

On page 5, beginning at line 25:

In one preferred embodiment of the invention, the averaging of the high transmit levels A of transmit waveforms [[74a-n]] 74A-B is accomplished by providing each successive waveform [[74a-n]] 74A-B with the same fixed offset when a new waveform [[74a-n]] 74A-B is added to the communication band. Thus, for illustrative purposes, transmit waveforms [[74a-n]] 74A-B are identical to each other except that they are time offset from each other by differing multiples of the fixed time offset t_0.

On page 6, beginning at line 5, paragraph no. 1:

For example, if transmit waveform 74a is the first signal to be transmitted by a communication band, it can be transmitted with zero offset. If transmit waveform 74b is the next signal to be transmitted within the communication band, it can receive time offset t_0 with respect to transmit waveform 74a. If a next transmit waveform [[74c]] is present ~~the next signal~~ to be transmitted, it can be time offset by t_0 with respect to transmit waveform 74b. This is equivalent to a time offset of $2t_0$ from waveform 74a. Each subsequent transmit waveform [[74a-n]] 74A-B to be transmitted by way of the communication band can then receive an additional offset t_0 in

the same manner. It will be understood, however, that it is not always possible to shift every waveform by any time offset that may be required by this method.

On page 6, beginning at line 15, paragraph no. 2:

Referring now to Fig. 5, there is shown graphical representation [[100]] of ~~including transmit waveform 74 and~~ total transmit power waveform 96. When practicing the method of the present invention, further averaging of transmit waveforms [[74a-n]] 74A-B, described in FIG.4, and therefore further improvement in the peak transmit power, can be obtained by smoothing data pulse 92 within data portion 90 of waveforms [[74a-n]] 74A-B prior to applying time offsets. In order to obtain this further improvement, conventional techniques for distributing the information of data pulse 92 throughout data portion 90 can be used. Additionally, the position of data pulse 92 within data portion 90 can be varied in order to minimize the peak transmit power. Using these methods, a transmit power level 94 can result within in total transmit power waveform 96.

On page 6, beginning at line 25, paragraph no. 3:

In another embodiment of the present invention, referring to FIG. 4, the various portions within time slots 72 of transmit waveforms [[74a-n]] 74A-B can be separated from each other and transmitted in any of the possible sequences. For example, within time slot 72 data portion 90 can be separated from the remainder of transmit waveform 74a and transmitted first. Pilot portion 78 can be separated and transmitted next after data portion 90. The remaining portions within time slot 72 can also be transmitted in any sequence. Applying this technique to the waveform of graphical representation 50, described in FIG. 3, portions A, B, and C can be transmitted as ABC, ACB, or in any other order. Furthermore, the sequences can be varied from one transmit waveform 74a-n to the next transmit waveform.

On page 7, beginning at line 23, paragraph no. 2:

Referring now to Fig. 6, there is shown transmit power prediction algorithm [[120]] 100. Transmit power prediction algorithm [[120]] 100 can be used to predict the new total power resulting from the addition of, for example, each transmission waveform [[74a-n]] 74A-B described in FIG. 4 to a communication system. Additionally, algorithm [[120]]100 can be used to predict a new total power for adding a transmission waveform [[74a-n]] 74A-B at each of a number of possible time offsets. Thus, it is possible to select the optimum time offset resulting in the minimum increase in peak transmit power. By determining the optimum time offset for each new transmit waveform [[74a-n]] 74A-B as it is added to the communication system in this manner further improvement in system performance is obtained in an heuristic manner. The algorithm 100 includes step 102 to determine if there is a new channel. If there is a new channel the algorithm moves to step 104 to calculate all possible power vectors. At step 106, the algorithm 100 selects the offset having the lowest peak. Then at step 108, algorithm 100 adds the new channel at the selected offset.

On page 8, beginning at line 13, paragraph no. 2:

When a new channel set up is required in order to add a new transmission waveform, the base station can compute the transmit power waveform W resulting from the addition of the new channel. The base station can then compute the resulting power vectors corresponding to each of the possible time offsets as follows:

$$(\overline{P}_n{}')_{(k)} = \overline{P}_n + cycl_k(W)$$

where [[*cyclk( )*]] $cycl_k(\ )$ is an operator that produces a cyclic shift of the vector W by k elements. The new channel can then be set up with the time offset that corresponds to the $(\overline{P}_n{}')_{(k)}$ having the peak power to average power ratio closest to one.

On page 9, beginning at line 11, paragraph no. 2:

The order of the transmission of the interleaved subregions can be a predetermined order, a random order, or any other order understood by those skilled in the art. Separation and interleaving of transmission waveforms in this manner provides excellent averaging of transmission waveforms and minimizing of peak transmits power. When regions within a transmit power waveform are interleaved in this manner, the receiver must wait for the end of a slot before it can begin decoding.